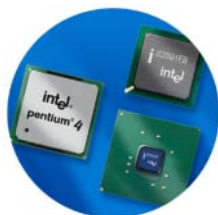




# Is there a storage solution that can drive PC performance?



Yes. Intel chipsets with  
Intel® RAID Technology bridge  
the gap between storage  
capacity and performance.

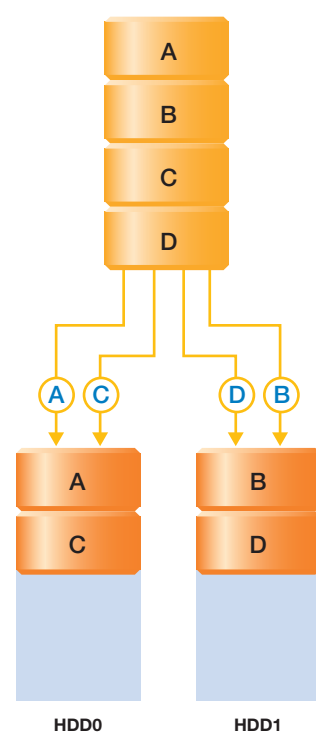


# Intel chipsets with Intel® RAID Technology bridge the gap between storage capacity and performance.

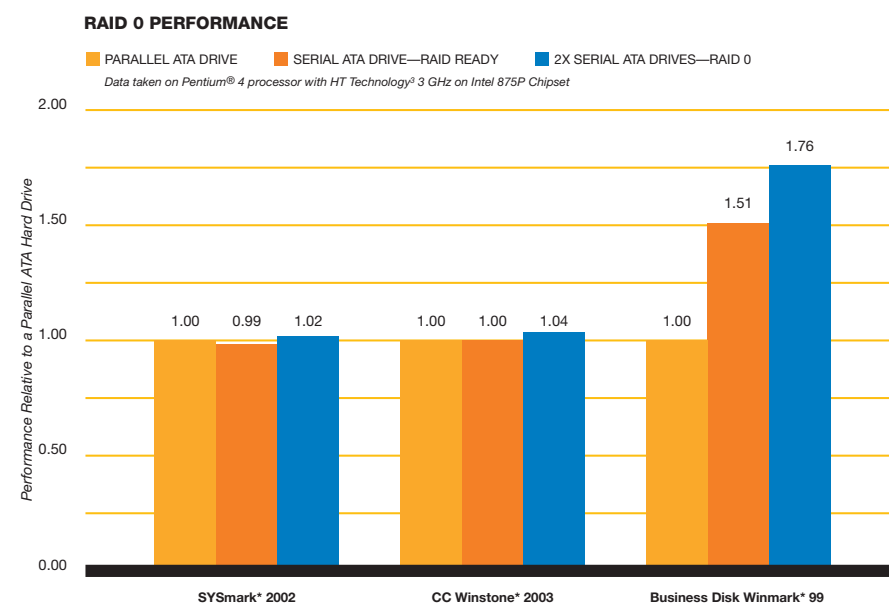
## The Storage Performance Gap

Led by the Intel® Pentium® 4 processor, new memory technology, and faster front-side bus frequencies, desktop platform performance has scaled dramatically in recent years. At the same time, desktop storage has not kept pace—limited primarily by the physics of mechanical hard disk drives. This can significantly limit system performance when accessing large chunks of data on the hard drive—an increasingly common occurrence with today's media-rich applications and games.

### RAID 0 IN ACTION



Data is arranged into blocks that are interleaved among the disks so that reads and writes can be performed in parallel for optimized disk performance.



## Performance Scaling with RAID

The solution lies in a core technology from the enterprise server arena known as Redundant Array of Inexpensive Disks (RAID). Originally developed by a research team at the University of California, Berkeley, RAID harnesses the power of multiple hard drives working in unison. While a single drive system has storage performance that is only as fast as the physical limits of the single drive, a RAID array can read and write data in parallel from multiple drives. This configuration, known as RAID 0, delivers exceptional storage performance and is specifically designed to optimize data transfer rates for disk-intensive applications.

## The Desktop RAID Solution: Intel® Chipsets with Intel® RAID Technology

Intel is making RAID capabilities a reality for desktop platforms by offering Intel® RAID Technology as a value-add feature on Intel's new line of desktop chipsets. Intel RAID Technology, based on tools from Intel's enterprise RAID products, is the industry's first RAID capability in the chipset and utilizes the latest Serial ATA disk interfaces for maximum performance headroom<sup>1</sup>. Intel RAID Technology can be found on select platforms based on the following chipsets:

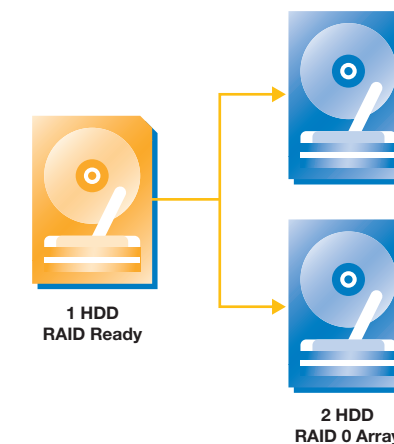
- Intel® 875P chipset
- Intel® 865PE chipset
- Intel® 865G chipset
- Intel® 865P chipset

## What Can a PC with Intel® RAID Technology Do For You?

Whether you want to quickly load huge files into Photoshop\* faster, create large CD/DVD images with Nero\* in record time, or want to be the first player on the map in a Quake\* frag tournament, Intel RAID Technology is the perfect solution for these and many other disk-intensive applications.

Video content, digital photos, music libraries, realistic 3-D gaming environments, and even TV programs recorded live from satellite are finding a new home on today's desktop PC. With megabytes, or even gigabytes, of data being transferred to and from the hard drive, storage performance counts and Intel RAID Technology delivers in today's media-rich computing environment.

### RAID MIGRATION



## Easy Upgradeability with Intel® RAID Technology

Building or buying a PC with a single Serial ATA hard drive, then upgrading to RAID at a later date is typically not a simple task, as it requires the reinstallation of the OS and applications. However, platforms supporting Serial ATA and using an Intel® chipset with Intel RAID Technology are easily

upgraded to RAID with the addition of a second Serial ATA hard drive in your system. The included Intel® Application Accelerator RAID Edition<sup>2</sup> companion utility completes the migration painlessly and is capable of running in the background while you surf the Web or read e-mail. Once the migration is complete, you can immediately experience dramatic increases in storage performance.

## Your Next Platform with Intel® RAID Technology

When looking for a desktop PC system designed to make your multi-media experience as rich as it can be, be sure to look for a platform supporting Serial ATA (SATA) and an Intel chipset with Intel® RAID Technology.

### Benchmark Configuration

Source: Intel® Configuration: Parallel ATA Drive—IBM® 80GB 120GXP IC35L080AVVA07-0 ATA-100 Hard Drive; Microsoft® Default UDMA-5, Serial ATA Drive Raid Ready and Raid-0—Seagate SATA ST3120023AS 120GB; Intel Application Accelerator 3.0.0.2387

All Platforms: Intel® Pentium® 4 Processor with HT Technology<sup>3</sup> 3 GHz and Intel 875P Chipset—Intel® 875P Desktop Board, 512 MB DDR400; BIOS: BZ87510A.86A.0017.P0, ATI® Radeon® 9700 Pro AGP 8X, Graphics Driver 6166, Intel® Chipset Software Installation Utility 5.00.1012, Intel C & Fortran compilers 7.0 for SPEC, DirectX® 8.1, Windows® XP Build 2600 SP1, 100 Mbps Intel Pro/100+ Management PCI LAN Card. Performance tests and ratings are measured using specific computer systems and/or components and reflect the approximate performance of Intel products as measured by those tests. Any difference in system hardware or software design or configuration may affect actual performance.

<sup>1</sup> Supports RAID Level 0 "Striping."

<sup>2</sup> System must be configured as "RAID Ready" to take advantage of Intel® RAID Migration Technology which includes enabling the RAID controller in the chipset and installing the Intel® Application Accelerator RAID Edition software drivers.

<sup>3</sup> Hyper-Threading Technology requires a computer system with an Intel® Pentium® 4 processor with Hyper-Threading Technology, a chipset and BIOS that utilize this technology, and an operating system that includes optimizations for this technology. Performance will vary depending on the specific hardware and software you use. See [www.intel.com/info/hyperthreading](http://www.intel.com/info/hyperthreading) for information.

FEATURES	BENEFITS
Intel® 82801ER I/O Controller Hub	Industry's first desktop RAID controller integrated directly into the chipset
Dual Serial ATA Controllers with RAID 0 Support	Exceptional storage performance utilizing the next-generation hard disk interface technology.
RAID BIOS ROM	Integrated into system BIOS, enables pre-OS RAID creation, naming, and deletion.
RAID Migration Capability	Seamless migration from a single hard drive to a RAID 0 array with no OS reinstallation required.
Intel Application Accelerator RAID Edition	Driver with full management and status reporting of your RAID array including detailed reporting of storage devices.

UNITED STATES AND CANADA	EUROPE	ASIA-PACIFIC	JAPAN	SOUTH AMERICA
Intel Corporation Robert Noyce Bldg. 2200 Mission College Blvd. P.O. Box 58119 Santa Clara, CA 95052-8119 USA	Intel Corporation (UK) Ltd. Pipers Way Swindon Wiltshire SN3 1RJ UK	Intel Semiconductor Ltd. 32/F Two Pacific Place 88 Queensway, Central Hong Kong	Intel Japan (Tsukuba HQ) 5-6 Tokodai Tsukuba-shi 300-2635 Ibaraki-ken Japan	Intel Semicondutores do Brasil Ltda Av. Dr. Chucris Zaidan, 940-10° andar 04583-904 São Paulo, SP Brazil

The Intel® Pentium® 4 processor and Intel® 875P chipset may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request. Intel Corporation assumes no responsibility for the use of any circuitry other than circuitry embodied in an Intel® product. Information contained herein supersedes previously published specifications on these devices from Intel.

Intel, Pentium, Intel SingleDriver and the Intel logo are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

\*Other names and brands may be claimed as the property of others.

Copyright © 2003 Intel Corporation

Printed in USA/0303/5K/MS/LB  
Order Number: 252803-001

